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Designing for Existential Sustainability

The Intersection of Social Sustainability and Universal Design, explored through Social Staircases.

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Abstract

In this article we discuss the notions of social sustainability and universal design by reflecting on a particular type of architectural element in common space, namely the "social staircases" that serve as multifunctional spaces beyond mere transportation, aiming at social interaction. Through empirical examples, including a detailed analysis of a newly built housing project in Sweden, renowned for its sustainability efforts, we highlight the multifunctional nature of social staircases. We conclude by introducing the notion of existential sustainability–acknowledging individuals' and groups' relational striving to find reasonably good living conditions – as a way to discuss limitations of practiced social sustainability and universal design. Through "existential sustainability" we intend to find a way in which these two commonly mentioned domains can be recognized, still expanded. This approach takes a diverse range of human experiences into consideration in design of social space. We argue that such a balanced approach, which takes into account individual and existential concerns alongside systemic and societal considerations is crucial for realizing the democratic potential inherent in spaces like the social staircase.

Keywords: ***Existential Sustainability, Social Sustainability, Universal Design, Urban Design, Human Diversity, Sustainable Urban Development, Architecture & Planning.***

Staircases as social space

Staircases have often played a multifaceted role beyond the obvious functionality of taking you from one level to another. This is particularly true if we include various forms of bleacher-style seating, i.e. spaces that are shaped as stairs, but not primarily designed for walking or transportation, but for sitting down. Such designs are commonly found in sports arenas and theatres. Similar arrangements can be found in schools and learning environments, then often referred to as "learning stairs" not seldom promoted as multifunctional architectural elements that "serve as both circulation and presentation space [giving] students a place to gather and socialize" (Wilson & Winebrenner 2017). A well-known example is the Zachry learning stairs at Texas A&M University (figure 1).

Figure 1. Stairs for walking, sitting and studying, Zachry Texas A&M University, [Photo credits: Texas A&M Engineering]

In addition to such spatial arrangements there are also more conventional stairs that have been designed with extra width or platforms to encourage social interaction, adding use-value to its primary purpose of transportation. Apart from these construed or deliberated special designs there are also numerous examples of conventional staircases from around the world where a spontaneous social use has emerged with time, including monumental stairs such as the Spanish Steps in Rome, Italy and the Potemkin Stairs in Odessa, Ukraine, or large entrance staircases frequently used as places for resting, such as that of British Museum, London, GB. These are cases where (the fame of) the place as such has contributed to the habit of just spending time in the staircase, and to some extent inversely, namely that the habit of sitting in the stairs slowly turns the place into common public property for recreation (Figure 2).[3]There are also examples where stairs intended for transportation have been complemented with platforms for socializing, as seen in Brf Viva (figure 6 &7), a housing project that will be discussed later in this paper.

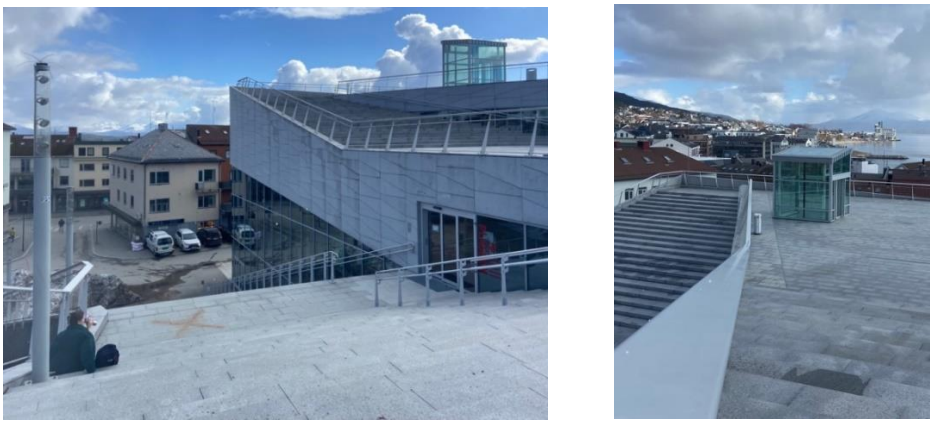

Figure 2. Staircase integrated with roof, offering rest and a view. "Plassen", Molde Cultural Centre, Norway. (Photo Gunnar Sandin).

[3]A recent (2012) outdoor example is the staircase of Plassen Cultural centre, Molde Norway. (3XN Architects).

In more architectural detail, the range of social stairs includes both the gallery-, stadium- or bleacher-style of stairs, but also the stairs that connect platforms or that provide specific activities when climbed, allowing temporary halts of various kind. The common denominator is that you are invited to spend time with others using the staircase as the place of active or more passive common interaction. Another common denominator is that in order to use them the capacity to climb them is a requirement.

It has been suggested that the social staircase is a trend that started with spaces for the urban populations in large cities, and has later spread to other, less urban, places: "*A coffee shop in Edgewater, New Jersey, population 12,044, has jumped on the trend — proof that even in suburbia, nothing suggests "cool" like stadium seating.*"(Dahl, 2018). The director of an influential interior-design firm suggests that social staircases are not just a cool-looking detail, but "*shows that a company is very open, that its culture is about social moments*" (Dahl, 2018).Statements like these articulate the contemporary wish and high belief in architectural elements providing space for meeting, gathering, and socializing, and that the social staircase has become an object that helps articulate and satisfy such wishes. A question arises as to what extent these designed staircases afford what they promise in terms of earning the attribute "social", and to what extent the ideas and promotion of such arrangements reaches beyond the visionary will to present attractive common space and reach a wide range of users. Through an examination of social staircases, our objective is to address the intricate relationship between social sustainability and universal design within the context of urban planning.

The potential and challenges of social staircases

The social staircase may encourage people to gather, to see and be seen, and perhaps even enter conversations – this is the democratic potential of such arrangements. However, while these spaces may promote social interaction, they also highlight critical issues related to accessibility, exclusion, and exposure. Despite their intention to facilitate social interaction, the "social stairs" are often lacking alternative means of access and choices of how to stay in them. What they are supposed to offer remains to a considerable extent impossible to use for instance for individuals who cannot climb stairs, or for those who do not enjoy exposure.

There are already attempts to look at, with user experiences obtained, cases where social stairs have been designed to be appreciated by more people. A seminal example is to be found in Vancouver, Canada.

Figure 3. Image from public stairs with steps and ramps intertwined, Robson Square, Vancouver. (Photo and copyright: Henry Lee, fotoeins).

The example of the Robson Square steps (figure 3), which opened already in 1983, highlights the sharing possibilities with sloping and diagonally running "crossways" that have no steps. The Robson Square steps is in this respect an attempt, although not perfect. It is accessible through both steps and ramps, but has been criticized for being unsafe, due to lack of railing. As noted by accessibility expertise it also has visibility challenges due to one color surface only, causing low contrast between steps, and between steps and ramp (Johnston 2019). The design of these types of ramped pathway solutions that exist at various places around the world, have on the whole met increasingly tougher demands as time passes. They have to consider both visibility, degree of sloping, and the possibilities for a visitor to hold on to railings, "as well as width" to afford movement for many. Additionally, there's the need to address wellbeing and psychological comfort. For some, a stage-like layout may not feel comfortable, as it lacks places to retreat from others' attention.

Turning to Sweden, the use of social staircases has grown increasingly popular in the last ten years, aligning with such trends in parts of Europe and in North America. With their growing popularity, there are companies offering expertise on social staircases. One of them[4] write at their homepage: "'Social stairs' or 'learning stairs' are an architectural element designed to encourage social interaction and engagement". In line with the statement of the company there are many recent examples of high-profile architectural projects centered on social staircases. Swedish examples include The Faculty of Medicine's new building in Lund, Forum Medicum (figure 4). It is a

[4]https://vivarailings.com/blog/social-stairs-learning-stairs-railing-systems (accessed 240319).

grand building hosting 4000 students and researchers, designed by the Danish architecture firm Henning Larsen Architects. The building opened in 2023. When entering the building, visitors, students, and employees are faced by a broad staircase centrally placed in the entrance hall. The staircase is the center piece of the building, and its design and generous measures invite users of the building to sit down and to socialize. A similar communicative use of staircases in the foyer can be found in many public- and semipublic buildings from the last decade throughout Sweden.[5]

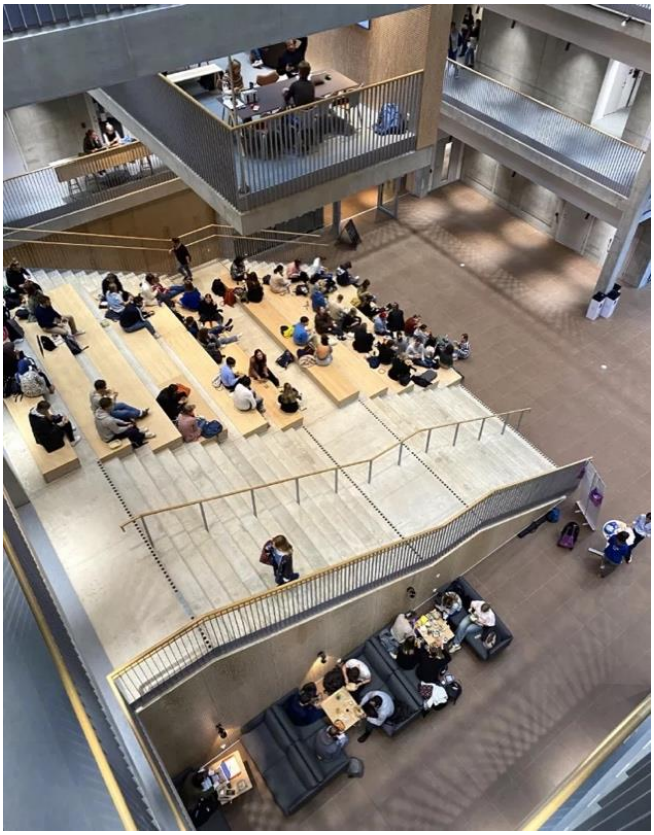

Figure 4: Forum Medicum, Lund university. Photo: Åsa Hansdotter.

[5]Other examples include Studio, in Malmö, by the Danish architects Schmidt Hammer Lassen; and Världskulturmuseet [The Museum of World Culture], Gothenburg, by the London-based architecture firm Brisac & Gonzalez.

It has been suggested that this kind of foyer, with a grand social staircase as the centerpiece, "plays into the notion of the open, tolerant and creative city where anything could happen" (Torisson, 2018). The stairs can be seen as a stage within this interpretation of the space, offering performative or extended narratological possibilities. This suggests a promotion of democratic values, as anyone is welcome to step onto the stage. However, the idea of everyone being welcome is, at a closer look, merely a mirage, a fact that we will come back to in this paper.

In the following section we will take a closer look at the social stairs and what they offer in *Brf Viva*, a housing project in Gothenburg, Sweden with a high sustainability profile.[6] Through that, we will also be able to reflect on the limitations in recent claims of social sustainability.

Attempts at Social Sustainable Design in a Housing Project

Brf Viva, Gothenburg

The word "Viva" means to live, and the prefix "Brf" stand for *Bostadsrättsförening*, the most common form of housing association in Sweden.[7] Brf Viva consists of six buildings with a total of 132 apartments. The buildings are six-story tall and create between them three sloping courtyards. The project was built on a site with a very demanding topology, a steeply sloping and rocky hillside. There are many similar plots in Gothenburg, sites usually left undeveloped due to technical limitations as regards building construction. The architect

[6]The project was awarded the prestigious Kasper Salin Prize in 2020.
[7]Brf is short for Bostadsrättsförening which is a cooperative condominium concept, a housing association where the owners of apartments share the costs of owning, maintaining and developing the building.

explains how they were initially supposed to build in a small park but decided to try to save it by building in a steep slope nearby instead (Gordan 2020). The developer, Riksbyggen, liked the idea of building on a site that had until now been considered un-buildable. The concept was named Positive Footprint Housing and high ambitions were set with the aim to become an international model for sustainable housing and urban development. This was to be achieved by a combination of technical and social innovation, and the support of sustainable lifestyles.

A collaboration was initiated between industry and academia, involving researchers from Architecture and Urban planning, as well as from the Department of Social Work and the Swedish University of Agricultural Sciences. Various departments of the City of Gothenburg and RISE, Research Institute of Sweden, were also involved. The aim of the project was "to develop Sweden's most innovative and sustainable housing project"[8] by combining energy-saving use of resources in the building process with requirements for sustainable mobility, ecosystem services, and social sustainability. The collaborating researchers had the possibility to make suggestions at the different stages of the project but were not part of the actual design process. Viva was initiated in response to environmental challenges, but as the project developed social sustainability became increasingly important. The questions of what could constitute actions and means of social sustainability in the project were repeatably put to the researchers (Gromark et. al 2021). Seeing to the finalised project, three social sustainability perspectives seem to have been particularly influential: affordability, flexibility, and community.

[8]https://www.sgbc.se/certifiering/vi-certifierar/stark-vilja-att-prova-innovativa-ideer-i-arets-miljobyggnad/ Sweden Green Building Council

Affordability (or perhaps better, *the lack of* affordability) was addressed through six one-bedroom apartments reserved for young people aged 18 to 30 and sold below market prices, but with rents covering the interest rates for the loans taken on by the housing association.[9]The model was developed together with Stockholm School of Economics. As regards flexibility, some apartments were designed as 2-4 room apartments to allow for a higher degree of flexibility than the conventional apartments with stable room distribution. Interior walls were made movable, allowing floor plans to be changed in response to changing needs of the household. Although both are interesting, it is the third strategy, the strive for *community*, that is most adequate to study for the purpose of this paper. Brf Viva is designed with more shared spaces than the average newly constructed housing block. In addition to the tripartite communal courtyard there are shared interior spaces including an orangery/gathering space and a greenhouse made for gardening and socializing. The developer expands on the project's social and existential ambitions when interviewed for the industry magazine *Arkitekten*: *"During the process, we talked a lot about how widespread loneliness is in our society. We wanted people to see each other, have the chance to exchange a few words, maybe on a stool facing south with the newspaper in front of their door".*

Community space: The Greenhouse as a social staircase.

The residents of Brf Viva share a greenhouse (figure 2).[10] The developer highlights the collective gardening in a press release by

[9]Housing associations use shared loans, the interests of which are distributed among members as monthly rents, to finance the apartments and maintenance of the building.

[10]https://www.riksbyggen.se/globalassets/1-riksbyggen/bostad/bostad/referensprojekt/brf-viva-referensprojekt/bofakta_brf_viva_web.pdf

giving voice to one of the inhabitants of Viva who is leading the gardening group. *"There is a great interest in gardening among the residents of Brf Viva, and we have formed a special gardening group /…/ Anyone can garden within the association. All that is required is to join the gardening group and be assigned a gardening plot."* She suggests that the gardening has contributed to residents getting to know each other and helped neighbours to socialize. (Riksbyggen, 2019). The program of the greenhouse includes gardening and social interaction. The greenhouse is described by the developer as a room "with space for cultivation, socializing, play, and various games" (Riksbyggen, 2019). The design of the green house can be described as a centrally located indoor staircase with terraces for growing on both sides (Figure 5). The staircase lacks handrailing and surface contrast, limiting who may actually use the greenhouse in the ways intended.

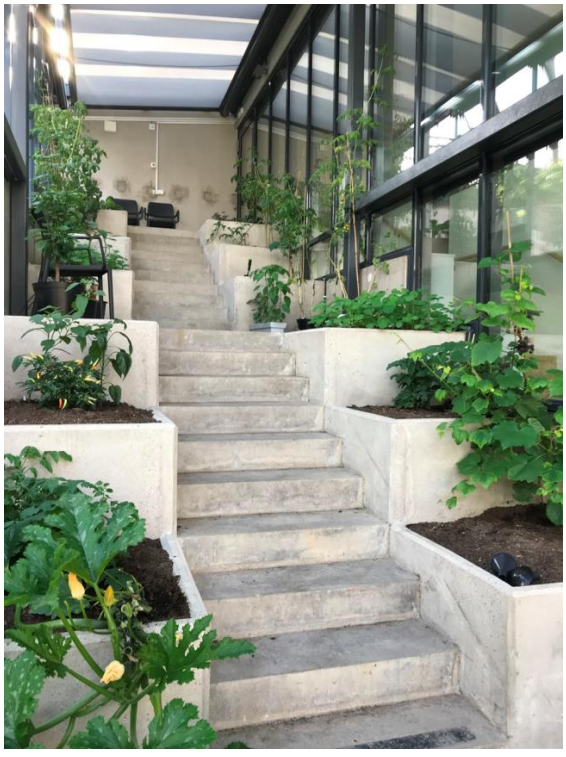

Figure 5. The communal greenhouse. (Photo: Lilian Müller)

Outdoor community spaces – a matter of stairs in an intriguing topology.

The framed landscaping of the three yards of Brf Viva is far removed from conventional yard designs with lawns and shared open spaces. These yards are instead characterized by their rough and inaccessible terrain adding to the overall challenges regarding accessibility (Müller et. al, 2022). Walkways consisting of stairs, paths and platforms have been constructed over the rocky terrain to lead residents between the buildings (figure 6 &7). Considering the interest in social sustainability, including extensive collaborations with research, the project is surprisingly poor in terms of social inclusion. Most of the outdoor staircases are composed of steel grids (figure 8), and sometimes the natural ground is integrated in the system of stairs (figure 9). Together this makes it difficult to use the stairs for anyone who is not a confident walker. Only one major platform can be accessed without using stairs.

Overall, it is easy to agree with the researchers involved in the Brf Viva project that it is characterised by an absence of universal design (Gromark et al 2021). Despite its focus on fostering community, its design consistently excludes individuals from participating in shared and common spaces, as we have seen, indoors as well as outdoors(Müller et. al, 2022). How come that designs of stairs, pathways and plateaus are not thought of in regard of a broader spectrum of abilities. How is it that a project deeply engaged with matters of social sustainability completely missed the mark on accessibility and issues related to human diversity?

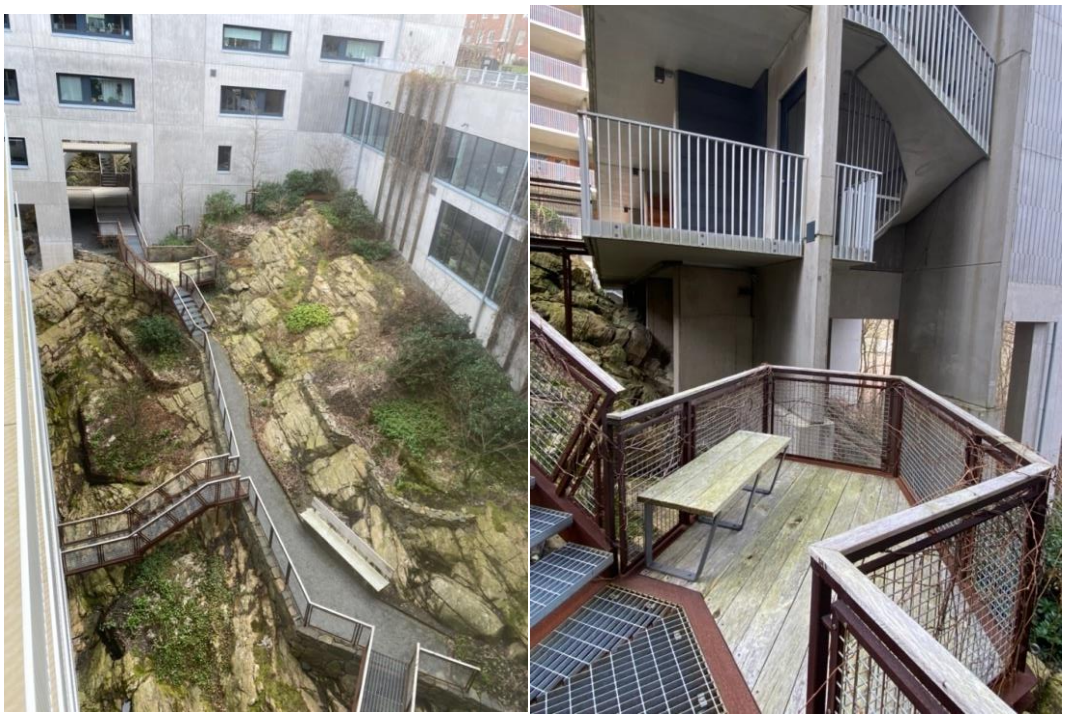

Figure 6 &7. The walkways in the yards consist of stairs, paths, and platforms with or without benches. (Photos: Ida Sandström)

Figure8. Staircases composed of steel grids. Figure 9. The natural ground is sometimes integrated in the system of stairs. (Photos: Ida Sandström)

Concluding discussion: the existential quest for integration of social sustainability and universal design

As observed in the case of *Brf Viva*, as well as in previous examples of social stairs aimed at both transport and social interaction, they frequently remain inaccessible to individuals unable to ascend stairs, due to for instance lack of horizontal ways to access plateaus, relevant railing, or sufficient coloring. Such oversight does not only limit access for some, but also has the unintended effect of reinforcing discriminatory attitudes. The presence of inaccessible staircases risks sending a message about who is valued and included in a particular space, a space which otherwise is given much place-formatting, even specific poetic attention. In general, such lines of community division becomes particularly problematic when social staircases are used in public buildings and in public spaces. The utilization of social staircases in public spaces carries the risk of unintentionally reinforcing discriminatory practices and attitudes in society at large. Hence, the democratic promise inherent in the social staircase remains unrealized so long as its access remains limited to certain individuals and bodies.

By using the social staircase as a lens, we shed light on the divide and unbalance between efforts in universal design and those in social sustainability. As we approach the end of this paper, we venture to speculate and look ahead by asking: *Can the limitations of social staircases forward a discussion on inclusive spatial design?* Despite the inherent challenges posed by spatial demands and social interaction, an integration of perspectives, knowledge and experiences from social sustainability on the one hand, and universal

design on the other, should be able to radically reform the design of the social staircase, as well as, in extension, of other urban and architectural infrastructures aiming at social well-being (Frichot et al 2017). We suggest that an integration of social sustainability and universal design would benefit from a broader, more existential, spectrum of thinking as regards shared urban spaces.

Discussions on universal design have often revolved around accessibility within the systemic realm, aiming to reform policies and regulations, after scrutinizing discriminatory flaws in built environment. Similarly, social sustainability tends to focus on systemic societal issues such as (coping with) segregation and health at the scale of groups and populations, when not simply postulating grand collective visions. Earlier attempts at combining Social Sustainability with Universal Design have formulated objectives like: "the connection between UD and sustainable development can be built up in a way that a design solution is not truly considered sustainable until it is accessible" (Vavik 2010, 305). The common systemic use of the term "social" tend to neglect the essence and particularities of lived experiences where existence is individually felt, this despite that social sustainability in earlier accounts have been seen as including also "the more basic needs of happiness, safety, freedom, dignity and affection" (Vavik 2010). Where, along the lines of development of the discourse and practice of social sustainability, one may ask, did such more existential views disappear? The relational and infrastructural forces that are able to support existential rights would in the same instance stand the chance to become the kind of designs and societies that avoid "unequal distribution of vulnerability" (Butler 2015, 210) as sensed amongst individuals or groups. This does not mean a design with

complete orientation towards individual's needs, but rather a consideration of the situational circumstance where an individual can act or not according to own choice (Ericsson, & Hedvall 2024). To enable integration of perspectives on human diversity and well-being, we therefore see a need to broaden the discourse to also include existential sustainability capturing basic human needs such as sense of belonging, purpose and meaningfulness in life.

Central to existential sustainability is acknowledging humans as relational individuals striving to find meaning in their lives. By examining how physical space and deep wellbeing intersect, existential sustainability reveals how our surroundings influence us and impact our sense of belonging in the world.[11]

Examining the case of Brf Viva, and the initially mentioned examples like the indoor staircases at the entrances of Forum Medicum in Lund, Sweden, and the Zachry stairs, Texas, USA, they are all intended to warmly receive visitors and offer social spaces for its daily users. Yet, it raises the question: to what extent do they invite people to make use of the staircases? What about those who cannot access the spaces? As already suggested, not everyone will find ease in the stage-like setting of a social staircase. A design that recognizes human diversity and considers the deeper psychological and existential aspects of human interaction would have to require less conformity from its users. When designing with existential sustainability in mind, a staircase would first of all ensure that everyone has equal access. This would not be enough however: for a

[11]"Existential Sustainability" is a recently emerging concept, explored for instance as the main theme of a conference 2022 at Lund University, followed by a doctoral course 2023-2024 in the Agenda 2030 graduate school program. https://projekt.ht.lu.se/existential-sustainability/phd-course/

space to be existentially sustainable it would have to offer more diverse opportunities for interaction with the physical space and other individuals. An existentially sustainable design would allow individuals to choose between visibility and seclusion as per their preference. Such design considerations would not only enhance accessibility but also promote well-being and foster a sense of belonging, integral to a broader notion of social sustainability.

In essence, by advocating for an integrated as well as expanded approach to social sustainability and universal design we aspire to acknowledge existential human concerns alongside more systemic and societal considerations. This requires a balanced approach addressing both systemic change and individual registers of well-being when designing shared and common spaces. To achieve this, we need a comprehensive understanding of individuals and the built situations that decide their existential movement of freedom, moving beyond simplistic labels like functional ability. Challenging such simplistic views of human nature, is a key to promote well-being, and make more prominent the social and democratic potential of public space, such as in the form of social staircases, as discussed in this paper.

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